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Management Assistant

H-1112-1 SAFETY AND HEALTH MANAGEMENT

**Safety and Health Program
Personal Protective Equipment Policy (PPE)**

**United States Department of the Interior
BUREAU OF LAND MANAGEMENT
OREGON STATE OFFICE**

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**SAFETY AND HEALTH PROGRAM
PERSONAL PROTECTIVE EQUIPMENT POLICY
(PPE)**

OR/WA Supplement to BLM Manual Handbook H-1112-1
Safety and Health Management

**DECEMBER 2003
Oregon State Office**

H-1112-1 SAFETY AND HEALTH MANAGEMENT

15.1.1 Policy Statement

The Oregon/Washington Bureau of Land Management (BLM) is committed to providing a safe and healthful work environment for all employees. The BLM has many work procedures, including administrative and engineering controls, in place which reduce employee exposure to hazards. However, many times these controls are not sufficient to fully protect every worker in every job task. Personal protective equipment (PPE) is the next line of defense against job-related hazards. PPE acts as a barrier between the employee and potentially hazardous chemicals, machines, tools, and processes. This Personal Protective Equipment (PPE) Policy will provide guidance to minimize employee exposure to hazards in the work place in accordance with OSHA Standard 29 CFR 1910.132 - 139, Subpart I Personal Protective Equipment.

15.1.2 Purpose and General Information

Employees are exposed to hazards on the job each day. These hazards can range from tripping over an electrical cord to exposure to a toxic chemical.

The BLM and the Occupational Safety and Health Administration (OSHA) work to protect employees from workplace hazards by requiring the use of personal protective equipment (PPE) to reduce employee exposure to hazards when engineering and administrative controls are not feasible or effective in reducing these exposures to acceptable levels.

Personal protective equipment *should not be used as a substitute* for engineering, work practice, and/or administrative controls. Personal protective equipment is used in conjunction with these controls to provide for improved employee safety and health in the work place. PPE includes all clothing and other work accessories designed to create a barrier between the employee and any workplace hazards. The basic element of any management program for personal protective equipment is a formal evaluation of the hazards and the equipment needed for employee protection.

Using PPE requires hazard awareness and training for each user. Employees must know that the equipment does not eliminate the hazard. If the equipment fails, or is used improperly, exposure will occur. To reduce the possibility of failure, equipment must be properly fitted and maintained in a clean and serviceable condition.

Selection of the proper personal protective equipment for each job is important. Supervisors and employees must understand the purpose and limitation of each type of personal protective equipment. The equipment must not be altered or removed even though an employee may find it uncomfortable. (Note: Equipment may be uncomfortable simply because it does not fit properly. Employee complaints of uncomfortable equipment should be investigated and corrected by the supervisor.)

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This Personal Protection Plan (PPE) is established to protect employees from workplace hazards through the provision of proper PPE for each identified work task. The plan ensures that thorough training is conducted to provide information regarding proper selection and fit, maintenance requirements, and employee responsibility regarding consistent use of the equipment.

The policy states that PPE devices will be used only when equipment guards, engineering controls, or management controls (administrative) can not adequately protect employees from hazards encountered on the job.

Protective equipment must be provided to employees to protect all body areas/parts which may be exposed to work site hazards. This Plan provides general information for use of the following types of PPE.

- Eye and Face Protection
- Respiratory Protection
- Head Protection
- Ear Protection
- Torso/Body Protection
- Arm and Hand Protection
- Foot and Leg Protection
- Bloodborne Pathogen Protection
- Other Personal Protection – Specific Occupations (*Refer to Section 15.1.14*)

For guidance regarding specific work activities, refer to the OR/WA Safety and Health policies listed below:

- Respiratory Protection Program
- Hazard Communication Program
- Bloodborne Pathogens Protection Policy and Exposure Control Plan
- Chainsaw Operator Training and Certification Policy
- Off Highway Vehicle (OHV) Policy
- Fall Protection Policy
- Control of Hazardous Energy - Lock Out/Tag Out
- Confined Space Entry Program

Refer all questions concerning hazardous material releases and response to such situations to the State Office or district environmental protection specialist.

OR/WA districts may use this policy as a template to create a Personal Protective Equipment Policy specific to site needs. District policies must meet the minimum requirements of OSHA and this policy.

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15.1.4. Responsibilities

Managers and supervisors are responsible for providing employees and volunteers with the appropriate PPE for assigned tasks. Each supervisor will review the work environments and activities to identify and assess potential hazards. A Risk Assessment is used to document the hazards associated with each job. (Refer to the BLM Risk Management Worksheet Form 1112-5. See *Illustration 1*)

The PPE used depends on the identified physical or health hazards. General examples are:

<i>Physical Hazards</i>	<i>Health Hazards</i>
Falling, moving, or flying objects	Chemical exposure
Heat or cold	Materials that can be inhaled or irritate eyes or skin (particulates)
Moving equipment or parts	Light radiation
Sharp objects	Noise hazards
Rolling or pinching objects	Biological Contaminants
Workplace layout and procedures	Electrical Shock Hazards

When PPE is required, the needed items will be furnished at government expense.¹ All PPE will be purchased in accordance with current Federal Acquisition Regulations (FAR) and must meet the applicable American National Standards Institute (ANSI) standards. Supervisors are responsible to ensure that employees comply with requirements for use of PPE.

The Safety Manager is responsible for assisting managers and supervisors in the identification of specific work place hazards that may require PPE and serves as a resource for PPE selection. Employees are required to use assigned personal protective equipment consistently and within the scope of training received. Employees may furnish their own protective equipment such as eye glasses and safety shoes provided such equipment meets the generally accepted standards of serviceability for the hazards identified in the work place. Employees are responsible to maintain all personal and government issued personal protective equipment in a sanitary and reliable condition. While each employee has exclusive use of government issued PPE, the equipment remains the property of the government and must be returned when no longer needed or when in need of replacement.

¹ Reference Department Manual Part 485, Chapter 20 – Personal Protective Equipment for specific guidance.

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15.1.5 Procedures

The supervisor and the employee must jointly prepare a Risk Assessment which describes the nature and severity of the hazards to which the employee is exposed and specify the equipment required to abate the hazard.

The model and style of the personal protective equipment or clothing will be determined by the supervisor in consultation with the Safety Manager, if requested. The responsible safety manager must sign the Risk Assessment prior to purchase. PPE should provide more than the minimum required protection to ensure employee safety.

To be effective, PPE must fit the employee correctly. Respirators, shoes and some hearing protection may have to be custom-fitted. Other PPE, like gloves and safety glasses, come in a variety of sizes to ensure proper fit. PPE can stretch and wear over time and must be thoroughly checked prior to each use. Defective or damaged PPE is not to be used.

Supervisors will provide appropriate safety and health training for employees who are required to wear personal protective equipment. At a minimum, each employee will be trained to understand at least the following:

- When PPE is necessary
- What PPE is required for various work activities
- How to properly wear and adjust PPE
- The limitations of assigned PPE
- The proper care, maintenance, and storage of PPE
- Appropriate disposal methods for worn or damaged equipment and replacement procedures

Employees must demonstrate an understanding of the training objectives and the ability to use the equipment properly prior to being allowed to perform work requiring the use of any personal protective equipment. Retraining opportunities will be provided when required.

To assist supervisors with training, a PowerPoint® presentation is available on the BLM Intranet Safety Web page at <http://web.or.blm.gov/safety/training/training.htm>.

This site also contains additional training aids including preparation notes for supervisors, an informal PPE quiz (also part of the PPE program), and a certificate of training completion.

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15.1.6 Eye and Face Protection

A. General Information

Many jobs create hazards that could injure the eyes or face. In this country, as many as 2500 eye injuries occur on the job every day. Most occur because employees:

- Are not aware of potential eye hazards
- Do not use protective eyewear
- Use the wrong type of eyewear for the identified hazard

Without proper eye and face protection, employees may be harmed by any of the following:

- Flying chips or particles (the most common cause of eye injuries)
- Electrical arcing or sparks
- Chemical gases or vapors
- Harmful light from welding, cutting, brazing, or soldering activities
- Liquid chemicals, acids or caustics
- Molten metal
- Dusts
- Swinging objects on the worksite, such as ropes, pulleys, chains, or tree limbs

Several types of PPE can protect the eyes from these hazards. The most common are:

- Shatterproof safety glasses
- Goggles
- Face shields
- Equipment with special shades

Emergency eye (and face) washes must be installed where caustic chemicals are used. These stations are recommended for all hazardous locations. First aid instructions are posted close to these stations as any delay to immediate aid can result in serious, lasting damage to the eyes and face. Specific requirements exist regarding placement and installation of eye wash stations in the workplace. (Reference OSHA 29CFR 1910.151 (c) *Medical and First Aid*, and ANSI Z358.1 *Installation and Operation of Emergency Eye Wash and Shower Equipment*)²

Employees who wear prescription glasses or contact lenses must wear protective eyewear that either incorporates the prescription in the design, or fits comfortably over prescription glasses without disturbing

² Emergency eye wash or shower stations must be installed as close to the hazards as practical, but no further than 100 feet or 10 seconds travel distance.

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the proper position of the prescription lenses or the protective lenses. If an employee wears contact lenses, they should be aware that dusty and/or chemical environments may pose additional hazards.

B. Selection

Suitable eye protectors must be worn where there is a potential for injury to the eyes or face. Protectors must meet the following minimum requirements.

- Provide adequate protection against the particular hazards for which they are designed
- Be reasonably comfortable when worn under the designated conditions
- Fit snugly without interfering with the movements or vision of the wearer
- Be durable and in good repair
- Be designed for thorough cleaning and disinfecting

In selecting appropriate eye and face protection, consideration should be given to the kind and degree of hazard. Where a selection of adequate protection is available, preference to worker comfort can be one of the deciding factors. All eye and face protective equipment must meet the requirements of ANSI Z87.1-1989, *American National Standard Practice for Occupational and Educational Eye and Face Protection*. Manufacturer limitations must be identified for the employee, and supervisors must ensure such limitations and precautions are observed.

Selection chart guidelines for eye and face protection		
The following chart provides general guidance for the proper selection of eye and face protection to protect employees against hazards associated with the listed hazard "source" operations.		
Source	Hazard	Protection
IMPACT – Chipping, grinding, machining, masonry work, woodworking, sawing, drilling, chiseling, powered fastening, riveting, and sanding	Flying fragments, objects, large chips of materials, particles, sand, dirt, etc.	Spectacles with side protection, goggles, or face shield For severe exposure, use face shield
HEAT – Furnace operation and arc welding	Hot sparks	Face shields, or spectacles with side protection. For severe exposure, use face shield
CHEMICALS – Acid and chemical handling, degreasing, plating	Splash	Goggles (eyecup and cover types) For severe exposure, use face shield
DUST – Woodworking, buffing, general dusty conditions	Nuisance dust	Goggles (eyecup and cover type)
LIGHT/RADIATION – welding, electrical arc, gas, glare	Optical radiation Poor Vision	Welding helmets/shields Shaded/special purpose lenses

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C. Fit, Inspection and Maintenance

The employee is responsible to keep all eye and face protective equipment in good condition. Eye and face coverings must be snug and effective in providing protection from hazards and be sufficiently comfortable for the employee to see and move around easily in the work environment. Prior to use, employees should ensure that:

- Sidepieces touch the side of the head and curl behind the ears
- Goggles fit so eyes look through the lens center, with the bridge on the nose, and the strap resting low on the back of the head
- Elastic headbands are flexible – not stretched, knotted, twisted, or worn
- Lenses and face shield windows are clean and clear – not dirty, pitted, or scratched

Prescription safety glasses must be fitted only by qualified optical personnel. The cost of frames and lenses will be paid by the agency following evaluation and review of need. However, employees are responsible for the cost of the eye exam. The prescription safety glasses will be issued for the exclusive use of the employee but will remain the property of the agency. Employees will sign a *DI-105 Receipt of Property* when receiving prescription safety glasses. Employees may purchase the glasses if they so choose.

Proper storage of eye protection will prevent the most common causes of damage. Use clean, dust-proof containers such as a plastic zip-lock bag. Storing face shields or goggles inside a tool box/chest where tools may damage the lenses is not recommended.

Two important protective eyewear precautions

Caution: Never use eyewear with metal frames in an area with potential electrical hazards as metal conducts electricity. Employees may risk serious or even fatal electrical shocks or burns.

Caution: It is advisable not to wear contact lenses where hazardous dusts, vapors, gases, or liquids exist that could get trapped beneath the lenses.

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Respirators must be provided to employees when necessary to provide protection from those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors. Employee protection must first be accomplished (as far as feasible) by accepted engineering control measures such as the closure or confinement of the work, sufficient general and local ventilation in the work area(s), and/or substitution of less toxic materials to be used. When engineering controls are not completely effective in controlling the hazards, appropriate respirators must be used.

A respirator is the best defense against inhaling contaminated air and *must* be used in the following circumstances:

- Where exposure levels exceed the permissible exposure limit (PEL); e.g., during the time period necessary to install or implement feasible engineering and work practice controls.
- In those maintenance and repair activities and during those brief or intermittent operations where exposures exceed the PEL and engineering and work practice controls are not feasible or are not required
- In all regulated areas
- Where all feasible engineering and work practice controls have been instituted and such controls are not sufficient to reduce exposure to or below the PEL
- In emergencies

Two main types of respirators are:

Air purifying – These may be simple dust masks or canister-type gas masks. These respirators block harmful particulates from entering the lungs but do not supply supplemental oxygen. A disposable surgical-type mask may be adequate for mild dust. Most air-purifying respirators, however, use replaceable filters, canisters, or cartridges to filter dangerous materials or absorb contaminants from the air.

Air supplying – These types include Self-Contained Breathing Apparatus (SCBA) and air line respirators that provide air from a tank or compressor when supplemental oxygen is required, when contaminant levels are high enough to be considered immediately dangerous to life and health (IDLH), or when an air-purifying respirator is ineffective.

Air supplying respirators are required when more protection is needed, when there is too little oxygen in the ambient air (<19.5%), or in situations which are immediately dangerous to life or health (IDLH).

Respirators must be selected to protect against the particular hazards of the work. There are strict rules for respirator use which include professional fit testing, identification and labeling of filter canisters, and thorough inspection procedures. Training is required before any employee may use a respirator. Each employee must know how to select, don, remove, and maintain the respirator. Medical evaluations are necessary when employees are required to wear respirators.

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Voluntary use of respirators is permitted in certain, specific circumstances. Additional guidelines for voluntary use may be found in the OSHA Respiratory Protection Standard under Appendix D to 29 CFR 1910.134, *Information for Employees Using Respirators When Not Required*. This Appendix is provided to employees who choose to use respirators voluntarily.

For further information, also refer to the OR/WA BLM Respiratory Protection Program.

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15.1.8 Head Protection

A. General Information

Prevention of head injuries in the work environment is critical. Most employees who suffer impact injuries to the head were not wearing proper head protection. These employees were usually injured while performing their normal jobs at their regular worksites.

Head injuries are caused by falling or flying objects, or by bumping the head against a fixed object. Head protection, in the form of protective hats, is designed to resist penetration and absorb the shock of a blow to the head. Special head protection is also available which provides protection from electric shock and burn.

B. Selection

A helmet (hard hat) must be worn when falling object hazards are present. Some examples of hazardous situations include working:

- Below other workers who are using tools and materials which could fall
- Around or under conveyor belts which are carrying parts or materials
- Below machinery or processes which might cause materials or objects to fall
- Near exposed energized conductors
- In areas with low ceilings, hanging objects, or moving equipment

Each type and class of head protection is intended to provide protection against specific hazardous conditions. An understanding of these conditions will assist in selection of the right hat for the particular work situation. Protective hard hats are made in the following types and classes.

Type 1 – helmets with a full brim, not less than 1 and ¼ inches wide

Type 2 – helmets with a peak extending forward from the crown.

Class A – These are hard hats for general service and provide limited voltage protection. They resist impact and penetration and are intended mainly for protection against impact hazards. They are used in mining, construction, shipbuilding, tunneling, lumbering, and manufacturing.

Class B – These utility service hats and caps protect the head from impact and penetration by falling or flying objects and from high-voltage shock and burns. They are used extensively by electrical workers.

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Class C – These helmets are usually made of aluminum and provide impact and penetration resistance only. They are specifically designed for lightweight comfort. This type of hard hat is not to be worn when working around electricity. These helmets are used in certain construction and manufacturing occupations, oil fields, refineries, and chemical plants where there is no danger from electrical hazards or corrosion. They also are used on occasions where there is a possibility of bumping the head against a fixed object.

For firefighters, head protection must consist of a protective head device with ear flaps and a chin strap that meet the performance, construction, and testing requirements stated in OSHA 29 CFR 1910.156(e)(5) – Fire Fighting/Brigades. The BLM provides standard issue head protection for identified work tasks such as fire fighting.³

Materials used in all helmets are water-resistant and slow burning, usually made of molded plastic. Each helmet consists of an outer shell which resists blows and penetration; and shock-absorbing suspensions (head bands and straps) which act as a barrier between the outer shell and the head to absorb impact. Some hats also have a liner to keep the head warmer in cold working conditions, as well as a chin strap. Ventilation is provided by a space between the headband and the shell. Helmet type can be discerned by looking inside the shell for the manufacturer label, ANSI designation and class identification.

C. Fit, Inspection and Maintenance

Protective hats have headbands which are adjustable in 1/8 increments. When adjusted to the correct size, the helmet provides sufficient clearance between the shell and the headband. As mentioned above, chin straps may be necessary if the employee is performing work above other workers, or, is assigned to fire fighting duties. Hearing protection, face, eye and neck protection devices are available for use with protective hats.

All components of the protective hat - shells, suspensions, headbands, sweatbands, and any accessories - should be visually inspected daily for signs of dents, cracks, penetration, or any other damage that might reduce the degree of safety originally provided to the employee. If damage is suspected, helmets should be replaced.

Helmets should not be stored or carried on the rear-window shelf of a vehicle as sunlight and extreme heat may significantly degrade the effectiveness of certain types of hats. Helmets must be stored in a cool, dark, dry place. Protective equipment must be cleaned in accordance with the manufacturer's instructions. A common method of cleaning shells is washing in hot soapy water and rinsing thoroughly. Helmets will not be painted or decals applied to the shell.

The standards for protective helmets are contained in ANSI Z89.1-1986, Personnel Protection – Protective Headwear for Industrial Workers-Requirements. Subsequent standards also apply.

³Acceptable helmets for fire line use are "helmet, safety, plastic" (NFES 0109, 8415-01-055-2265/GSA) listed in *NWCG National Fire Equipment System Catalog: Fire Supplies and Equipment* or equivalent helmet meeting 1977 NFPA standard requirements and ANSI Z89.1-1986. Reference also *MTDC Tech Tip Publication* (0267-2331-MTDC)

H-1112-1 SAFETY AND HEALTH MANAGEMENT**15.1.9 Ear (Hearing) Protection and Conservation****A. General Information**

Exposure to high noise levels can cause hearing loss or impairment. It can also create physical and psychological stress. There is no cure for noise-induced hearing loss, so the prevention of excessive noise exposure is the only way to avoid hearing damage. Specifically designed protection is required, depending on the type of noise encountered and the auditory (hearing ability) condition of the employee.

When employees are subjected to sound levels exceeding 85 dBa within an 8 hour work day, feasible administrative or engineering controls must first be utilized. If such controls fail to reduce the sound levels, personal protective hearing protection will be used by employees exposed to these noise levels.⁴ The agency provides for hearing tests of those employees who work in high noise areas; e.g., who are exposed to more than 8 hours (time weighted average) of noise at 85 dBa.

B. Selection

There are three basic types of hearing protectors:

- Earmuffs – These provide the greatest protection.
- Earplugs – These seal the ear canal and may come in standard sizes or individually-molded varieties
- Canal caps – These are soft pads on a headband and are much like headphones. They seal the entrance to the ear canal.

The type of ear protector used depends on the level of noise in the work area. In some cases, earplugs may be worn in addition to earmuffs. Employees may select hearing protectors from a variety of suitable protectors provided.

C. Fit, Inspection and Maintenance

Preformed or molded earplugs must be professionally fitted by a health care professional. Waxed cotton, foam, or fiberglass wool earplugs are self-forming. When properly inserted, they work as well as most molded earplugs. Some earplugs are disposable. The non-disposable type should be cleaned after each use for proper protection. (Note: Plain cotton is ineffective as protection against hazardous noise.)

Ear protectors must also be inspected before use. If they are loose, cracked, or damaged in any way, they must be replaced. Employees should wash their hands prior to inserting earplugs. Ear protectors should be cleaned prior to storage.

⁴ For example, employees using a chainsaw for an 8 hour work day are exposed to sound levels in excess of 100 dBa. Work tasks requiring the use of any powered hand tool generally expose the user to sound levels higher than 90 dBa.

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Earmuffs must make a perfect seal around the ear to be effective. Glasses, long sideburns, long hair, some jewelry, and even certain facial movements, such as chewing gum while working, can reduce protection. Special hearing equipment is available for use with glasses, helmets or face shields.

For additional information, refer to the OR/WA Hearing Conservation Program.

H-1112-1 SAFETY AND HEALTH MANAGEMENT**15.1.10 Torso/Body Protection**

Many hazards can threaten the torso; heat, splashes from hot metals and liquids, impacts, cuts, acids and radiation. Regular work clothes cannot always provide sufficient protection against certain work place hazards. Some jobs require a full protective suit; for others, an apron or leggings will suffice. A variety of protective clothing is available including vests, jackets, aprons, coveralls, and full body suits. All clothing should be inspected to ensure proper fit and function for continued employee protection.

Wool and specially treated cotton (duck) are two natural fibers that are fire-resistant and comfortable as they adapt well to changing workplace temperatures. They are intended for moderate heat or sparks. Cotton duck (treated or untreated) is a closely woven cotton fabric and is good for light-duty protective clothing. It can protect against cuts and bruises on jobs where employees handle heavy, sharp, or rough material.

Special flame-retardant and heat-resistant synthetic fabrics are well suited for fire fighting activities or for jobs around open flames.

Rubber, neoprene, vinyl, or other protective materials are for wet jobs or to handle acids, corrosives, chemicals and pathogens. Leather is often used in protective clothing to guard against dry heat and flame.

Disposable suits of plastic-like or other similar synthetic materials are particularly important for protection from dusty materials or materials that can splash. If the substance is extremely toxic, a completely enclosed chemical suit may be necessary.

It is important to know what hazards are in the workplace and to select the proper torso PPE for the job. Refer to the manufacturer's selection guides for the effectiveness of specific materials against specific chemicals. Ensure that street clothes do not become a hazard. It is important to take these precautions:

- Do not wear pants that drag on the floor and cause tripping hazards
- Do not wear pants with cuffs for jobs that could create flying sparks or embers
- Avoid loose sleeves or ties; be certain to button long sleeves at the wrist
- Remove clothes immediately if they are soaked by a flammable liquid
- Do not wear jewelry around machinery. If a necklace, ring, bracelet or watch catches in moving machinery, serious injury or death can occur. Remember that metal jewelry can also conduct electrical current.

When removing protective clothing, inspect all items for damage. Take off contaminated clothing from the top down, and do not let the clothing touch the skin. Place soiled or contaminated clothing in the proper containers for cleaning, decontamination or disposal.

For additional information and guidance for special work activities, refer to *the OR/WA Off - Highway Vehicle (OHV) Policy* and the *OR/WA Chainsaw Operator Training and Certification Policy*.

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15.1.11 Arm and Hand Protection

A. General

Hand protection is required when employees are exposed to hazards such as those from skin absorption of harmful substances, severe cuts or lacerations, severe abrasions, punctures, chemical burns, thermal burns, and harmful temperature extremes. Statistics show that almost 70 percent of individuals who injure their hands at work are not wearing gloves. Wearing the right glove is an excellent way to prevent most injuries.

B. Selection

There is a wide assortment of gloves, hand pads, sleeves, and wristlets for protection against various hazardous situations. The work activities identified in the Risk Assessment will determine the degree of dexterity required, the duration, frequency, and degree of exposure to hazards, as well as the physical stresses that will be applied. It is also important to understand the performance characteristics of gloves relative to the specific hazard anticipated. The glove manufacturer can supply test standard information.

The protective glove should be selected to fit each job. For example, some gloves are designed to protect against specific chemical hazards. Some employees may need to use gloves – such as wire mesh, leather, and canvas – that have been tested and provide insulation from burns and cuts. Certain occupations also require special protection. For example electricians need special protection from shocks and burns. Rubber is considered the best material for insulating gloves and sleeves from these types of hazards. The employee should become acquainted with the limitations of the clothing used. General guidelines include:

<i>Glove Type</i>	<i>Protection Provided</i>
Metal Mesh	To prevent cuts from sharp objects
Leather	To protect against rough objects, chips and sparks, or moderate heat
Cotton Fabric	To protect against dirt, splinters, slippery objects or abrasion. (Not recommended when working with rough, sharp, or heavy materials)
Rubber, Neoprene, Vinyl, or other types of chemical protection	For protection against chemicals Refer to the material safety data sheet (MSDS) for specific instructions (See further information below)
Specially-insulated or fire-retardant gloves	To protect against heat, cold, electricity, and open flames
Latex gloves (and other materials)	To protect against blood borne pathogens

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Selection of the proper gloves for protection against chemical hazards is critical. The toxic properties of the chemical(s) must be determined; in particular, the ability of the chemical to cause adverse effects on the skin and/or to permeate the skin and cause systemic effects. Generally, any “chemical resistant” glove can be used for dry powders.

For mixtures and formulated products, (unless specific test data is available), a glove should be selected on the basis of the chemical component with the *shortest* breakthrough time. Employees must be able to remove the gloves in such a manner as to prevent skin contamination.

Employees may need other types of hand protection such as barrier creams, hand pads or thumb or finger guards or tapes. Long sleeves and cuffs can add some measure of protection to arms and wrists.

C. Fit, Inspection and Maintenance

Employees must ensure that the gloves they use for work activities fit properly to provide the fullest protection. Gloves must cover the hands completely and be comfortable. Prior to use, gloves must be checked for cracks, tears, or other damage. Gloves must be replaced when required.

Gloves must be removed carefully to avoid contamination to bare skin. Single-use gloves must be disposed in the proper containers (e.g., hazardous waste or blood borne pathogen containers, etc.) Other gloves must be cleaned and decontaminated following use.

Clean gloves must be stored right side out in a cool, dark, dry area.

Caution: Not every job requires gloves. In fact, they can become a hazard rather than a protection. If gloves get caught in a machine, they can cause serious injuries and possible amputations. Review all hazards carefully.

For additional information, refer to the OR/WA Blood Borne Pathogens Protection Policy and Exposure Control Plan.

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15.1.12 Foot and Leg Protection

A. General

According to OSHA research, most employees who suffer foot injuries were performing their normal job activities at their worksites and were not wearing the proper protective footwear. The typical foot injury was caused by objects falling fewer than 4 feet and weighing around 65 pounds.

Safety shoes and boots provide both impact and compression protection. Where necessary, safety shoes can be obtained which provide puncture protection. In some work situations, metatarsal protection should be provided, and in other special situations, electrical conductive or insulating safety shoes would be appropriate.

For protection of feet and legs from falling or rolling objects, sharp objects, molten metal, hot surfaces, and wet slippery surfaces, employees should use appropriate foot guards, safety shoes, or boots and leggings. Leggings protect the lower leg and feet from molten metal or welding sparks. Safety snaps permit rapid removal of these leggings.

B. Selection

All safety shoes should be sturdy and have an impact-resistant toe. In some shoes, metal insoles protect against puncture wounds. Additional protection, such as metatarsal guards, may be found in some types of footwear. Safety shoes come in a variety of styles and materials, such as leather and rubber boots and oxfords.

Safety shoes or boots with impact protection would be required for carrying or handling materials such as packages, objects, parts or heavy tools, which could be dropped or in other situations where objects might fall onto the feet. Shoes or boots with compression protection would be required for work activities involving skid trucks (manual materials handling carts) around bulk rolls (such as paper rolls) and around heavy pipes or other materials where the potential for roll over on the foot is high. Footwear with puncture protection would be required where sharp objects such as nails, wire, tacks, screws, large staples, scrap metal, etc., could cause puncture injuries (construction and maintenance activities).

Aluminum alloy, fiberglass or galvanized steel foot guards can be worn over usual work shoes, although they may present the possibility of catching on something and causing workers to trip. Heat-resistant soled shoes protect against hot surfaces like those found in the roofing, paving, and hot metal industries. Employees who work with chemicals should wear boots or boot covers made of chemical-resistant materials. Insulated shoes protect employees against cold.

Safety footwear is classified according to its ability to meet minimum requirements for both compression and impact tests. These requirements and testing procedures may be found in the American National Standard for Personal Protection – Protective Footwear, ANSI Z41-1991.

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A Risk Assessment must be completed by the supervisor and the employee to determine the need for, and type of, protective footwear required for each work task and associated hazards.

C. Fit, Inspection and Maintenance

Each employee is responsible to ensure that protective footwear fits properly, is comfortable to wear, and contains no structural defects. Reference the manufacturer's guidelines for maintenance and care.

D. Caulk (Lug Sole) Boot Guidelines

Caulk or lug sole boots (minimum of 6-8 inches from heel to top) will be worn by BLM employees whose forestry duties *routinely* require field activity. Environmental hazards that may be encountered include traversing steep, rocky or uneven terrain that may be slippery; hiking through thick brush; walking on or over logs and other down materials; and working in tick-infested areas. Specific requirements exist for fire fighters.⁵

The BLM will supply lug sole boots on an "as needed" basis for individual employees following a review of use and supervisory approval. These boots may be re-caulked or resoled in lieu of new purchases. The cost of this type of repair will be borne by the agency. All boots purchased by the BLM should be worn during official duty only.⁶

⁵ Reference the *Interagency Standards for Fire and Fire Aviation Operations 2004* (Red Book). For the BLM this document is Handbook 9213-1. The Red Book is updated yearly.

⁶ The supervisor or custodial officer will establish accountability procedures for boot purchases. These procedures will include information regarding employee responsibility for proper use and repair of boots. Reference Department Manual Part 485, Chapter 20 Personal Protective Equipment for specific guidance.

H-1112-1 SAFETY AND HEALTH MANAGEMENT**15.1.13 Blood Borne Pathogens****A. General**

All employees with potential occupational exposure to blood or other potentially infectious materials shall be provided with personal protective equipment. *The OR/WA Bloodborne Pathogen (BBP) Protection Policy and Exposure Control Plan (ECP)* provides specific direction for the selection and use of personal protective clothing and equipment. Additional guidance is provided regarding employee exposure determination, engineering controls and safe work practices. Methods of compliance are outlined.

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15.1.14 Other Personal Protection – Specific Work Activities

A. Fall Protection

In jobs involving potential fall hazards, safety belts, lifelines, body harness, and/or lanyards must be used. Refer to the OR/WA Fall Protection Program for additional information.

B. Chainsaw Operation

All employees who operate chainsaws are required to wear specific personal protective equipment. The OR/WA Chainsaw Operator Training and Certification Policy provides guidance for selection of personal protective equipment.

C. Hazardous Material Operation and Response

Employees trained and certified to respond to hazardous material incidents and spills have specific requirements for the use of personal protective clothing. Questions and concerns should be referred to the Environmental Protection Specialist on the district.

D. Watercraft Activities

A Coast Guard approved life jacket or buoyant work vest should be used by employees involved in activities where the danger of falling into water exists. A Risk Assessment will indicate specific requirements for this type of personal protective gear. Policies for activities involving watercraft are site specific in OR/WA.

E. Confined Space Entry

Employees involved in entering confined spaces, such as manholes, utility vaults, etc., must follow specific procedures and wear protective clothing dependent upon the identified hazards of the job. Refer to the OR/WA Confined Space Entry Program for specific guidance. (BLM employees **do not** enter permit-required confined spaces.)

F. Electrical Equipment - Maintenance and Repair

All minor repairs and preventative maintenance activities of electrically-powered equipment require careful assessment of hazards to ensure selection of the proper protective clothing to provide full safety protection for employees. Refer to the OR/WA Control of Hazardous Energy (Lock Out/Tag Out) Policy.

G. Off Highway Vehicle Use

Employees who use all terrain vehicles or motorcycles during field work are required to wear special protective equipment during all times of operation. The OR/WA Off-Highway Vehicle (OHV) Policy provides guidance for the selection and use of required personal protective equipment.

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American National Standards Institute (ANSI)

- A coordinating body of trade, technical, professional, and consumer groups who develop voluntary standards, including standards used for personal protective clothing and equipment. Clothing that meets the ANSI standards is so identified by manufacturers.

Chemical-protective clothing - Clothing that may be resistant to chemical permeation, penetration, or degradation.

Chronic – Human health problems whose symptoms develop slowly over a long period of time or frequently recur. Chronic effects are the result of long-term exposure and are long-lasting.

Contaminant – Something that soils, stains, or infects by contact or association.

Corrosive – A substance that can destroy other materials, including human tissue.

Decibel (dB) – A unit of sound measurement

Earmuffs – Padded cushions on a headband that cover the ears.

Earplugs – Foam or other molded plugs that fit into the ear canal

Electrical shock – Electrical current entering the human body causing damage

Engineering controls – Mechanical and/or structural procedures such as exhaust ventilation, machine guards, and noise reduction, separate from PPE and safe work practices, that help protect against workplace hazards.

Eye hazards – Hazards that affect the eye or ability to see

Face shield – Clear window on frame that fits over the protects the face

Goggles – Eye coverings that seal around the eyes and hold to the head with a headband or strap

Impervious – Unable to be penetrates

Leggings – Protective coverings that cover the leg from ankle to knee

Neoprene – A synthetic rubber characterized by superior resistance

NIOSH – National Institute for Occupational Safety and Health

Particulates – Minute, separate particles

Penetration – A chemical's passage through an opening in a protective material

Permeation – The passage of a chemical through a piece of clothing on a molecular level, even if the materials has no visible holes

Personal protective equipment – Any devices or clothing worn to protect against workplace hazards

Toxic substance – A chemical or mixture that may present an unreasonable risk of injury to health or the environment

Vapor – A substance in a gaseous state

H-1112-1 SAFETY AND HEALTH MANAGEMENT REFERENCES

Federal OSHA

OSHA: Personal Protective Equipment (PPE) (Publication # 3077)

www.osha.gov

Safety and Health Topics: Personal Protective Equipment

<http://www.osha.gov/SLTC/personalprotectiveequipment/index.html>

OSHA: Construction Industry Information – PPE

<http://www.osha-slc.gov/sltc/constructionppe/index.html>

OSHA Fact Sheet – PPE (2002)

http://www.osha.gov/oshdoc/data_general_facts/ppe-factsheet.pdf

OSHA On-line Training

<http://www.free-training.com/osha/ppe/ppemenu.htm>

OSHA eTools

FAQ's for Eye & Face Protection <http://www.osha.gov/sltc/etools/eyeandface/faqs.html>

FAQ's for Respiratory Protection <http://www.osha.gov/sltc/etools/respiratory/index.html>

Federal Centers for Disease Control and Prevention (CDC)

Personal Protective Equipment Program

<http://www.cdc.gov/od/ohs/manuel/pprotect.htm>

OR-OSHA

Personal Protection Equipment Training Requirements – Module Two

<http://www.cbs.state.or.us/external.osha.educate/training/pdf/203xm2.pdf>

Program Directive – PPE for General Industry

<http://www.cbs.state.or.us/external/osha/pdf/pds/pd-211/pdf>

Department of the Interior

Bureau of Land Management

National Park Service

U.S. Fish and Wildlife Service

Department of Agriculture

U.S. Forest Service

Interagency Standards for Fire and Fire Aviation Operations 2004 (Red Book)

(Updated yearly)

Illustration 1
(15.1.1)

H-1112-1 SAFETY AND HEALTH MANAGEMENT Risk Management Worksheet*

(*Official form may be referenced on the Safety Website and the BLM Forms Link on the Intranet.)

For Illustration Only

1. Organization and Location										2. Page ____ of ____				
3. Operation/Task					4. Beginning Date			5. Ending Date		6. Date Prepared				
7. Prepared by (Name/Duty Position)														
8. Identified Hazards		9. Assess the Hazards: Initial Risk			10. Control Measures Developed for Identified Hazards (include all PPE)			11. Assess the Hazard's Residual Risk		12. How to Implement the Controls		13 Supervisors and Evaluation By		
(Be Specific)		L	M	H	E	(Be Specific)			L	M	H	E	(Be Specific)	(Be Specific)
14. Remaining Risk Level After Control Measures Are Implemented. (Circle Highest Remaining Risk Level)						LOW Line Supervisor		MEDIUM (Branch Chief)		HIGH (District Manager)		EXTREMELY HIGH (Must be State Director/Associate)		
<p>15. RISK DECISION AUTHORITY: (Approval/Authority Signature Block) [If initial risk level is Medium, High or Extremely High, brief risk decision authority at that level on controls and control measures used to reduce risks] NOTE: If the person preparing the form signs this block, the signature indicates only that the appropriate risk decision authority was notified of the initial risk level, control measures taken and appropriate resources required; and, that the risk was accepted by the decision authority.]</p> <div style="border-top: 1px solid black; width: 50%; margin-top: 20px; margin-left: 50px;"> <div style="text-align: center;">Signature</div> </div>														

Form 1112-5
May 2001